

NEWSLETTER
VOL. 7, NO. 8

JACG TACE

OCT. 1987

Single Copy
Price \$2.00

THE JERSEY ATARI COMPUTER GROUP



BBS
201-298-0161

EDITORIAL

Firstly, I would like to thank both Steve Godun and Ron Kovacs for their generous offers of help with the Newsletter. Whether it be labor or articles, all such offers are greatly appreciated.

What's new in the world of ATARI? As I had mentioned in the last issue, both 8-bit and ST software appears to be available in profusion, with a proliferation of new titles. One rumor (and I stress, RUMOR) that I have come by is that the much touted drive for the 8-bits; the single, double and enhanced density - double sided drive with a new DOS (ADDS) is no longer. Vaporized into a stock 1050 with a different colored (XE colored) case. Indeed, what is new?

From rumor to hard fact (and hard disk, to be sure)...I understand that Mark Knutsen has (finally) verified and loaded all uploads (that had been languishing) to the hard disk. They are now available for downloading from the BBS. Yes, wonders never cease!

Well, my feet are cold, my nose is running (but I can still catch it!), and I've got to get this issue to the printer (yes PRINTER!); so until next month - happy computing!

D. B. Noyes



IN THIS ISSUE

President's Corner - T. Pazel.....	3
Noise from Noyes - D. Noyes.....	3
dBMAN - P. Machiaverna.....	4
Congratulations - S. Cory.....	5
Keyboard Blues - N. Van Oost, Jr.....	6
Poem - J. Hicswa.....	6
PDG - D. Van Hook.....	7
Easter Eggs - S. Godun.....	7
From the Desktop - L. Peckham.....	8
Stylewriter - D. Shanefield.....	10
A Little Bit - B. Callegari.....	11
For Sale.....	11
Scientific Notation - D. Dvorin.....	12
Planetarium Fix-D.Jones(G.R.A.S.P.)..	14

MARK YOUR CALENDAR !!

JACG
Meeting Schedule

NOVEMBER 14, 1987

J-A-C-G SPECIAL !!!

* OCTOBER ONLY *

SX212

MODEM

For use with ALL Atari, IBM,
IBM-compatible, and RS 2
equipped computers

ATARI

The ATARI SX212 Modem's sophisticated circuitry and built-in features make telecommunicating with your Atari "ST", ATARI "8-bit", IBM, or any RS232-equipped computer or terminal fast and easy. It answers incoming or dials outgoing calls, chooses the appropriate transmission speed, sends and receives, and disconnects - all AUTOMATICALLY!

And the ATARI SX212 is HAYES-compatible. Existing industry standard telecommunications programs designed for the Hayes family of modems will run on the SX212 Modem.

* Full HAYES-compatible command set.

* Directly connects to telephone lines through a standard modular jack.

* Easy connection to RS232 or Atari SIO computer ports.

* Industry-standard Bell 103- and 212A-compatible

* Multiple transmission speeds: 75-300 baud or 1200 baud.

* Touch Tone or Pulse dialing.

* Full- or Half-Duplex.

* Built-in speaker monitors the progress of your calls, alerting you to busy signals and wrong numbers.

\$ 99.95 with cable
for ST or XL/XE

Requires NO special interface for
XL/XE

(201) 267-0988

GEMINI
ENTERPRISES

86 RIDGEDALE AVENUE
CEDAR KNOLLS, NJ 07927

Your ATARI Connection

PRESIDENT'S CORNER

Tom Pazel - JACG

Other election year is winding down and I've been trying to assemble in my head the things that the JACG has accomplished over the past year. I wish I could rattle off dozens and dozens of things, but I'm afraid I can't. However, I think I can name some of the highlights.

Certainly, the first Frank Pazel award was somewhat special (especially to me). David Favin was highly deserving and I'm sure next year's winner will be as well. By the way, folks, start thinking about nominations for next year. It's not that far off...

In my humble opinion, the one thing that we REALLY accomplished this year was the setting up and implementation of our BBS. With an ST, floppy drive and a 20 meg hard drive hooked on, I think it is one of the best BBSs around (of course, I suppose I'm a bit partial). I find it hard enough to sit down once a month and write what you're now reading, but our SysOps, Gary Gorski, Tom Shoosmith and Mark Knutsen always seem to find the time to handle any problems that may arise, wade through dozens of uploads so that we can enjoy them, keep the system available, etc., etc., etc...I don't know how they do it, but I sure am glad they're there to do it. If you are a user of the board, let these guys know that you appreciate what they do. I'm sure they would like to hear it.

Our disk library has certainly come a long way in the last year, thanks to Sam Cory and his helpers. Again, like our SysOps, all these folks have done a tremendous job and are definitely deserving of our thanks.

All of our officers have done a great job this year, but I'm sorry to say that not all of them will be able to serve us next term. As most of you should know, the final nominations and election of officers is scheduled for the November meeting. I urge you all to be there and vote! The October meeting will consist of nominations for ALL offices. We encourage competition, so the more nominations, the better. I can tell you now that the following offices are "wide open" as of this writing: President, V.P. 16-bit and Treasurer. Remember, though, that ANYONE may run for ANY office.

See you at the meetings!



NOISE from NOYES

D. B. Noyes - JACG

The inveterate bargain hunter has been at it again. The latest ANTIC (November, 1987 - winter already?) has in its CATALOG section two "bargain" pages (yes, both 8-bit and ST). 130XE MAGIC (a combination of WORD MAGIC, SPELL MAGIC, and GRAPHIC MAGIC [demo'd at a recent meeting]) for only \$5.95! SEVENS & KLONDIKE SOLITAIRE (which I bought a month ago for \$15.95) is now \$5.95. The BEST OF ANTIC ANTHOLOGY (book only, purchased by me two years ago for \$12.95) is now (with disk!) only \$6.95. MAPWARE, a former APX classic, is only \$5.95. I highly recommend it, especially in combination with a screen-dump program. I also ordered such greats as ATARI ITALIAN (cassette) [might want to learn Italian someday] from the ELECTRONIC ONE for only \$3.85 - got to be a bargain! Other software was as low as \$1.85! Bargains are, of course, not limited to mail order. GEMINI in Cedar Knolls has a bargain basket out again with 8-bit software at three for a dollar. I, of course, availed myself of the opportunity and my wallet was consequently liberated of a not so inconsequential amount of green paper.

I have on loan (you don't think all I do is spend money, do you?) one of those new-fangled computer chairs (you know the type - the chair that looks like it belongs in a doctor's examining room - putting it as delicately as possible!). The jury is still out on this one. I'll let you know what I think of it when I'm able to get up off of the floor, that is!

Since the ICD MIO Board is no longer in my hardware collection; I went out and bought a MICROSTUFFER by SUPRA. Nothing is easy - it will not work with the P:R: CONNECTION by ICD. Luckily it will work with the built-in printer interface in my TRAK drive. The short of it is, it makes the editing and the production of Newsletter copy a lot easier.

What's going on with ANALOG? Late or combined issues, very late disk issues - I hope there isn't another HOME COMPUTER MAGAZINE, HI-RES, or CREATIVE COMPUTING in the offing. I personally rate it number one of the ATARI dedicated magazines.

About the local (NJ) resident who shot up his (I think it was an IBM or clone) PC...I understand that his PC's condition after the shooting incident was terminal!

Until next month...

dBMAN

a database program for the ST

Paul Machiaverna - JACB

I have used a few database programs in my five years of computing. But, never have I come across one as powerful as dBMAN. dBMAN is essentially a dBASE look alike by Versasoft Inc. Versasoft take the power of dBASE and combines it with a down to earth price for both Atari ST and IBM computers. More about price and machine support later. I find it hard to review a database program without it sounding too much like a tutorial. I have chosen to give a brief explanation of a database in general. The emphasis, however, is placed on reviewing dBMAN for the experienced database user and how it stacks up to other similar products.

If you don't know what is a database, then just think of a database as a collection of information which can be accessed many different ways. Let's take for example a database which contains information about all the software available for the Atari ST. This way we would always have a list of titles with a description of each, as well as author, software vendor, list price, etc. If we want a list of all the wordprocessor programs for the ST we would simply request a list of titles from our database and let the computer do all the work finding them. What if we want the list of wordprocessors to only include the ones which are less than a certain amount of money? No problem. Just ask the computer and you'll get the answer. Remember, that it is possible to make a database file on anything. The JACB 8-bit disk librarians have a disk available with all the titles and descriptions of the files on the disks for sale. That disk can be called a database because it contains a list of information. I hope this explains a database to you to some extent. But, I don't want to spend anymore time on database theory. Rather, let's get on to dBMAN!

First let's take a look at the technical specifications. Each database file you create is capable of handling 2 billion records. Each record can be up to 4000 bytes long with up to 128 fields. Given this amount of space, I doubt you will ever bring dBMAN to it's limits. Four data types are recognized; Character (Alpha-Numeric), Numeric, Date, and Logical (Boolean). You are allowed up to 256 global variables and 64 local variables for your command files. dBMAN can read 3 different file formats from disk; DBF (database file), DIF (data interchange format), and TXT (text, delimited ascii). This allows easy reading and writing of files for use other than dBMAN. Any ST model may be used as long as you have at least 400K RAM free. This means that you must have TOS in ROM if you have a 512K RAM machine. Both Color and Monochrome monitors are supported. You may use dBMAN with floppy disks but a hard drive is recommended. I've used both and there is a dramatic difference in the performance between them. For casual database work the floppies will suffice. But, for

serious work the hard drive is a must.

When you first boot up dBMAN you are at a command line with the program waiting for you to type in an instruction. At this prompt you can execute any dBMAN command or function. It is very easy to create, append, update, and delete database files. You select the number of fields per record, the type of data and name for each field, and the length of each field. It is also very easy to modify this structure at anytime. The database file can either be sorted or indexed on any field. Remember that sorting is the physical rearrangement of the file in an order, while indexing is when an index file is created containing a list of pointers to the records in the database. As with any database program, indexing allows much faster searching for a particular criteria. Also, if you open the index file along with the database file when you append records, each record will be automatically indexed into it's proper order.

Screen and printer output is easily controlled by the wealth of commands dedicated to both devices. A screen display is formatted by using location coordinates for each item. A printed page is formatted by defining margins and page length, as well as the location coordinates as on the screen. You can embed control characters in the output to take advantage of the special features of your printer. Headers and footers are easily defined to further enhance the appearance of the hardcopy. It is possible to dBMAN format and generate an entire report from any database file. You define the entire form of the report, which records and fields to print and then let dBMAN do the rest of the work. The only drawback printer output is that dBMAN is not able to detect if a printer is online or not with a proper trap routine. I have experienced two responses to the offline condition when sending a string to the printer; either dBMAN will give an error message and stop, or dBMAN acts as if the condition does not exist and, of course, the string is not printed. Versasoft has told me that a fix to this bug is now being worked on and will be available as soon as possible.

As if dBMAN wasn't powerful enough, we are also given the ability to include any combination of the available commands and functions. In this level dBMAN acts as an interpreter to it's own structured, high level language. In essence you are writing programs (command files) using a database language as you would write one in BASIC, PASCAL, C, etc. I would say that it closely resembles PASCAL. Therefore, you should be familiar with structured high level language programming before attempting to write your own command files. This language allows you to write true turnkey applications for any situation. For example, all those fancy databases you have seen in stores at the checkout counters and by doctors in their offices can all be created using this feature. The command files simply allow the operator to use and maintain a database without memorizing a list of commands. The operator simply answers the prompts on the screen. Which leads right into very important feature of dBMAN; menus. You can create vertical or horizontal menus on the screen so that the operator can respond to a prompt by simply moving the arrow keys or



pressing the first letter of the desire menu item and pressing return. As the operator moves about the menu each item appears in inverse video when the cursor is placed on it. This is very valuable when you, the programmer, do not want the operator to enter bogus responses to prompts.

A feature which I have to thank Versasoft for with my utmost appreciation is the fact that they give you the choice between using or not using GEM. Instead of locking you into using or not using GEM, you simply call in a command file to use GEM. If you choose to use GEM you are also given the option of creating your own custom pull down menus and dialog boxes. I personally do not prefer to use GEM because I do not like to use a mouse whenever I am doing any keyboard intensive work, such as database applications. I find it very cumbersome to search around for the mouse, choose an item, type in data, search for the mouse, etc, etc. when I am using the keyboard to enter data in the first place. I realize, however, that the overall Atari ST software market demands the use of GEM and Versasoft needed to answer the call. Their approach to the use or non-use of GEM is brilliant and I wish more software would have this option.

If anyone reading this is familiar with dBASE for the IBM, they will probably be saying to themselves that the features of dBMAN are nothing new. And they are right. But, dBASE costs at least 5 times as much as dBMAN! You can find dBMAN for under \$100 dollars, whereas dBASE is over \$500. Versasoft openly admits that the concept behind dBMAN is taken from dBASE. They have given a list comparing dBMAN to both dBASE II and dBASE III, making it very easy to convert programs between both programs. Note that dBMAN is written for the IBM PC as well as the Atari ST. This and the similarity to dBASE should ring a bell; you can sell or swap command files with the large base of PC users out there. You can call up PC bulletin boards and download the huge amount of custom applications available.

What do I use dBMAN for? Actually, I started using it when I took on the job of setting up a database system for a lawn sprinkler system contractor. I am currently in the development stage of writing command files with dBMAN's language for a custom application which includes a customer database, servicing, and billing for the company. I really feel that dBMAN is an important step for ST software. It's power and programming capability makes it an excellent choice for any business application. Combined with the low price of the software and ST hardware, it is possible to set up an extremely fast and powerful system costing thousands less than a comparable IBM system. Furthermore, Versasoft has proven itself as a dedicated Atari ST vendor with their generous user support. They have continued to update dBMAN since it's original release in 1985, and the technical people answering the calls of the users are very familiar with the field of database applications. They have been most helpful in answering my questions. There is an extensive tutorial included with the package. It takes you through many aspects of the uses of dBMAN. There is a very good mailing list file included also.

dBMAN is one of the best programs written for the Atari ST. If you don't want to take my word for it, try it yourself. I'll admit, however, that if you are only need to use a database casually then dBMAN is definitely overkill. You surely don't need a integrated programming language with a database program to keep track of a simple database such as a list of a record collection. But, if custom applications is what you are after, dBMAN is undoubtedly the way to go. Any questions? Drop me a note on the JACG BBS and I'll be glad to answer you.

**Congratulations
Steve Godun**

Sam Cory - JACG

Again, congratulations Steve, you have described an excellent system for fast reproduction of one disk at a time. Unfortunately, your JACG disk library would take too much time to get filled for each meeting. We copy more than 75 double sided disks for each meeting (on the average). This includes new issues and refills of old issues. It does not include those disks needed for: Beta testing; exchanges with other clubs; and kind members who submit new material (they always take our offer of a JACG library disk in exchange). How bad can this get? Some months we have sold 120 disks which would take approx 6 hours at your speed. I nearly forgot, we also have to make extra disks to make sure you will be able to purchase any disk at the meeting. So far we have turned away very few sales.

Even with Happy drives I spend better than 1 hour every day of the month on the library. Oh yes, why Happy. There is a unique Happy program called "multi drive" which permits making 3 copies at a time if you have 4 drives with a Happy Enhancement. Now do you get the idea? At first, I was limited to a ramdisk and one Happy. This is approx equivalent to your setup. Copy time seemed interminable as My time was wasted. I have now upgraded my own equipment to 3 Happy drives.

Also, you as a user need, to take into consideration one more item. Older Atari users have found replacement copies or duplicates expensive and sometimes very hard to get from the manufacturer when their originals were bad. I hate to use an original when doing the Print shop work. Crashes occur fast. Happy solves this problem by allowing easy duplication, thus protecting your investment. Isn't it nice to be SAFE. No I do not make any money from Happy. They even ignore letters from me!

Your expression of concern about our treasury is much appreciated. That you asked a question is most helpful to all members. We need member participation if we plan to stay a viable club. Remember NO question is a bad question.

Sam Cory, Disk Librarian

Ed. Note...As I mentioned in the last issue - I have taken Steve's advice relative to Copymate 4.3 (or 4.4) in conjunction with ICD's US Doublers (I went out and bought a second one). I am very pleased with the results. For personal use the speed and ease of sector copying is entirely satisfactory. Of course, for the disk library, I can see Sam's point as to the time saved in using Happys in order to make 3 copies at a whack.

----- KEYBOARD BLUES

Neil Van Dost Jr. - JACB

I had just turned on my 130 XE to complete a Turbo Basic program I was working on, I typed in the LOAD.... Guess what! No Quote mark, no X, no half dozen other keys. Part of my keyboard had died.

If this happens to you, don't panic, there is a solution to try. All that is required is some patience, manual dexterity and some tools. Tools required are: 1)two needles, 2)two jumper wires with alligator clips on both ends, 3)an Ohm meter with a 1X scale, 4)an artist double 0 paint brush, 5)some Q-tips, 6)a magnifying glass, 7)some paper towels, 8)a bottle of COPPER PRINT from GC Electronics, 9)a small cross point screwdriver-the kind you clip in you shirt pocket, 10) a regular cross point with with a small point.

The COPPER PRINT should be available at most electronic supply houses. I didn't try Radio Shack, but they might have something similar. Before you disconnect your 130 write down the keys that don't work. Now disconnect your computer. Pick a well lighted clean work space and lay down some paper towels to work on. On the bottom of your 130 are four screws, remove them. Now holding your 130 by the sides turn it over and remove the top and lay it aside.

Before you do anything further, take a good look at how the keyboard sits in the computer, and how it is connected. The connection is on the lower right, it is a clear plastic ribbon with silver trace lines, that is stuck into a connector in the 130. Lay your keyboard over so you can get at the cable. Firmly grasp the ribbon cable on both sides close to the connector. Gently rock it back and forth until it comes free.

Place the bottom of the computer aside, were it will not be in the way and place the keyboard, key side down in front of you. Now, get up, have a coffee or a cold drink and relax a bit.

When you are ready to proceed, remove all the screws, about twenty or so -- I didn't count them, and place them aside were they will not get knocked on the floor or lost. Your keyboard will now separate into three parts, the metal back the plastic sheet with the keyboard circuit and the part with keys. Take your time and remember how everything came apart, if in doubt, make notes. You can now lay the part with the keys and the metal back aside.

Take another break as the most difficult part is yet to come. Look at the plastic circuit board, on one side the trace shows silver and the other black. Place it with the black trace up, then match up the trace with the key positions of the keys that were missing. Use the magnifying glass and look for a break. When you find the break, you must very, very carefully

scrape the black away on both sides. Use a sharp pen knife or razor knife, but be very careful and use a light touch. All you want to do is expose about 1/8 of an inch of silver on each side. Handle the plastic circuit board very carefully, try not to flex it to much.

Time for another short break. Get your bottle of COPPER PRINT and start shaking it, I recommend at least 3 to 5 minutes in order to get the copper particles well mixed. Now using the fine brush join the broken parts. Use the Q-tips to clean up any mistakes, making sure that no adjoining traces were bridged. When you are satisfied with your work and have allowed at least 10 minutes for the COPPER PRINT to dry, set up your meter on the R x 1 ohm's scale. use the jumpers to go from probes to the needles. Now very carefully touch the trace on both sides of the break, you are looking for zero ohms. Remember to zero your meter before you start.

Reassemble your computer. Be careful not to over tighten the screws on the back of the keyboard and make sure you plug it in streight and it makes good contact. Power up your 130, with a little luck, your repair job is finished. If the problem still exists, you will have to do the whole procedure over again. It took three times and about 2 1/2 hours before I finished mine.

If you don't think you can do the above seek help. preferably free help and as a last resort, remember it will cost \$40 to \$50 if you have to have it done by a service center and if you botch the job it will only cost around \$60 to \$80 to pick up a used 130. The risks are worth it.

----- Farewell Computer

Joseph Hicswa - JACB

My computer was terminal,
As I labored on alone.
Frustrated family members came to ask,
"Are you married to that clone?"
With red-rimmed eyes and raspy sigh,
"Til death" was my reply.

They pulled the plug...Computer died!

Doug Van Hook

The PLAN*ED screen appears with a colorful display, sounds, and a menu with three selections. The choices are EDITOR, DEMO, and DATAMAKER. Anxious to see results, you select DEMO. LOADING... it begins to type a list of features. A plane flies over the top of the screen and drops a bomb. A small well-defined character walks over and examines the bomb. It explodes violently, throwing the little man clear across the screen. WOW! Will PLAN*ED generate these colorful displays in my programs?

NO! NO! NO! The PLAN*ED demo is somewhat misleading. Listing the Demo program will show you just how complex it is. While the demonstration program does use animation sequences generated by the Editor, some sophisticated assembly language subroutines are used to achieve its dazzling effects.

PLAN*ED is an acronym for Player-Missile-Animation-Editor. It really is a valuable tool, especially for the programmer working on animation. Animation is achieved by editing characters in as many as 60 different positions. The program then cycles through the pictures, giving the appearance of movement. The Editor has many features which make this process fun and easy to do.

Create Data File is an option which will take the pictures you have formatted with the editor, and create a file which can be included in a BASIC or Assembly Language program. The Create Data File feature is a major improvement over the Character Editors of the past which could only control one screen at a time. But, if you expect PLAN*ED to write the program for you, as the demo seems to indicate, you could be disappointed.

Disk #128D is double-sided with another excellent editor on the other side. DESIGN MASTER is an example of the new generation of graphic editors. It is driven by clearly defined Pull-Down Windows. Initially you can select the Editor, or the Print option. The editor displays the first window which includes options for; Disk (loading and saving), Page(1 or 2), Text (slanted or regular types with many sizes), Line, Rectng, Circle, Block, Fill, Erase, and Undo. The editor permits you to edit two screens at one time transferring graphics from one screen to the other. This allows you to fill one screen with Flowchart Symbols and customize a Flowchart on the second page.

Clearly the most unique feature of this program is the versatility of the CIRCLE, RECTNG, and BLOCK commands. When you select these, you get a choice of TEN different

variations of each shape. To quote the HONDA commercial, "Why you need Dis... I Dunno?" The additional choices usually have concentric images of the shape within each shape. In other words, variations of the circle have many circles inside the original circle etc.. The Artifacting which occurs creates some unusual effects. Artifacting is the technique whereby colors are created in GRAPHICS 0 by drawing lines offset by one scan line between points.

Pressing the SELECT key provides more options which control Drawing Mode, Pencil Type, Repeat, Grid (dots ala Typesetter), and Zoom features. Pressing the OPTION key returns the main selection menu at any time.

Drawing is at first annoying with the Crosshairs which appear on the screen, but experience shows its value in making lines the same length from across the screen.

Although the Demo for PLAN*ED was a little over dramatic, this disk shows the increasing quality of the Public Domain Software in our library. The disk was given to JACG by S*P*A*C*E, and was developed in Germany.

Our disk of the month is \$3.00 at the meeting, but to order our disk of the month by mail send \$4.00 to:

MAIL ORDER LIBRIAN
Bret Callegari
306 Division St. Floor 2
Boonton, NJ 07005

Easter Eggs

Or "What You Might Not Have Known"

Steve Godun - JACG

I'm going to take a break from my now regular monthly reviews so I can tell you about a few things I've found out and heard about over the time I've been using Atari computers (about 8 years). Many of you have probably heard about some or all of these little goodies, but for those of you who haven't, read on.

First, let me explain where I got the title for this article. An "Easter Egg" is any portion of a program that is undocumented anywhere in the program, much like finding the toy surprise in a box of Cracker Jack. Just like a programming "bug" can pop up when you least expect it, Easter Eggs (Atari coined the title back in 1980) pop up in the middle of a program, sometimes even when not initiated by user actions. With all that in mind, off we go!

Probably the most known Easter Egg is in the old Atari 2600 game, "Adventure". There is an invisible dot located in the maze in the black castle. Take this dot to a certain room and you can see the programmers' name. I've heard about the dot for a long time, but haven't actually seen it in action until recently. If you'd like to know how to do it, leave me E-Mail on either the JACG BBS, Zmag Information Network, or my own BBS, Timelink BBS. I'll get back to you ASAP.



FROM THE DESKTOP

By Linda Peckham



Greetings, and welcome to another column of From the Desktop! Summer is over, school is here, and the holidays of the fall season are coming, as the icons above remind. And as the year slides down towards Christmas, it may be possible to say that the pace in the Atari world is picking up speed, from the summer doldrums ...

Diddling Around, or, Dropping a Cap

One of the things I have been planning to experiment with for some time is creating a "dropped cap" in Publishing Partner. This is a small feature not directly supported by the current software. It is doable, however, as you can see. There are two approaches. The first, shown in Figure 1, is done by creating an extra column the height of the capital, for the indented text. The capital itself is a separate object, and can be moved around to line up with the other text. The second approach, shown in column two, keeps the capital in the column with the rest of the text, makes it a subscript, and uses manual line-spacing and tabbing. The first approach seems to work better, in terms of lining the capital up, but the second requires somewhat less work.

Diddling Around, Part 2 (Drawings)

The greatest lack that Publishing Partner has, vis-a-vis its oldest competitors, EasyDraw and Graphic

Artist, is the ability to create drawings. Bit-mapped graphics imported from the paint programs are fine for most things. But sometimes, one wants to produce line-drawings at the printer's resolution. But how to do it, with PP's distinctly limited repertoire?

One of the big new products in the Macintosh publishing world is the Adobe Illustrator. This package produces line art drawings in Postscript format. The basic approach is to import a bit-mapped image, and then use that as a template to create the actual drawing. It occurred to me, a couple of weeks ago, if it might be possible -- in a simple-minded way -- to do something like that with PP.

It's possible. Just not very easy.

I haven't had much time to play around with this method, but a few rules of thumb become apparent rather quickly. Most obviously, unless the drawing will consist of a single free-hand line or polygon, make sure the drawing is where you want it, before you start. Also, remember that a bit image will not be displayed larger than its 100%, imported size. If you want a 1" image, you may want to use a 3" bit-image, shrink it to 33%, then work in the 300% view. And set the measurement system to centimeters -- this will give you the most ruler segments, for lining up the cursor. (Two more suggestions for Softlogik -- close the polygons like DEGAS -- let the user hit the return key! So much easier, than trying to get the cursor in the right place. And show the cursor position numerically, in the draw mode.) Finally, if you do end up moving the drawing, or modifying it, be prepared to request the "send to back" command -- you'll need it, to get the right object selected!

The results are -- potentially, at least -- better than bit images, as the two books on the bottom of this page show. You surely don't need me to point out, which is

which, do you?

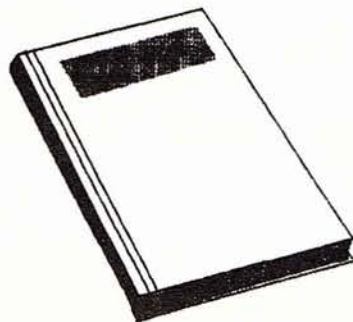
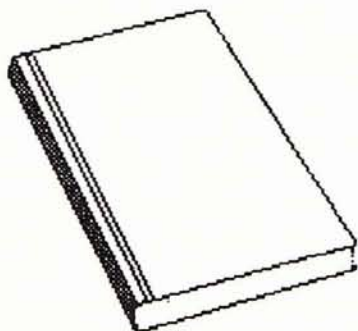
At least one person is providing line-drawings for sale. A Randy Cline left a message on GENIE several weeks ago, offering three pages of clip-art for \$9.95 plus a disk. He will also scan images (on the new, \$1200 scanner from Navarrone?) for \$4.00 per image plus a disk and shipping. The source of the image should be either a black & white picture, or a description of the desired line art. Mr. Cline can be contacted at the following address:

OUTSTANDING CLIP-ART
1117 N. 57th ST.
Springfield, OR 97478
(503)-726-1479

I'll try to have some more information, and the clip-art disk, by next month's column.

Coming Up

As the major selling season for computers approaches, the Atari desktop field appears on the verge of heating up. Fleet Street Publisher has been available in stores for a while. Most reviews I've read like the program interface and setup, but find the printer output marginal, with only 9-pin printers currently supported. CAD programs and other desktop packages are promised, particularly the former. And the promised Atari Laser Printer may have even stiffer competition than it has now. Recent messages on GENIE indicate that NEC is planning to introduce a low-cost laser printer shortly, while another company, called



FROM THE DESKTOP...

Genicom, is planning to market a Postscript-clone laser printer for \$2000. I don't know the company, but if this one shows up, I think a number of people may look at that, and at the \$1500 Atari printer (if it stays at that price), and wonder if \$500 isn't worth a Postscript work-alike that can be attached to any computer.

While most of the planned desktop packages known about are from software companies already established in the ST line, the next new competitor -- if they keep their announced shipping dates -- apparently is a newcomer. Those of you who read ANTIC may have noticed in the October issue, an ad for a word processor called **WORD-UP**, from Neutron Engineering. Promising basic desktop publishing features on top of the word-processing features, this ad quickly generated a new topic in the GENIE bulletin board area. The company has responded to the messages, and uploaded a short file describing more of the features of Word-Up. It will use GDOS for output, and they promise a 24-pin printer driver as well as the standard 9-pin drivers. While Word-Up will have the same font limitations as all GDOS programs (one font file required for every size), it does have two features which PP does not currently have -- and one which may not be matched even in Version 2.0! Word-Up will supposedly have the ability to automatically flow text around graphics. More importantly, though, it will have the ability to anchor the graphics to the surrounding text! This is a nice feature to have if a document comes in for extensive reformatting over a number of pages. This word processor, if it comes out, and does as promised, could be an interesting contender. Demos are supposed to be shipping before you read this, to dealers, with the full package in late October. I'm still using STWRITER, but I may look seriously at this one.

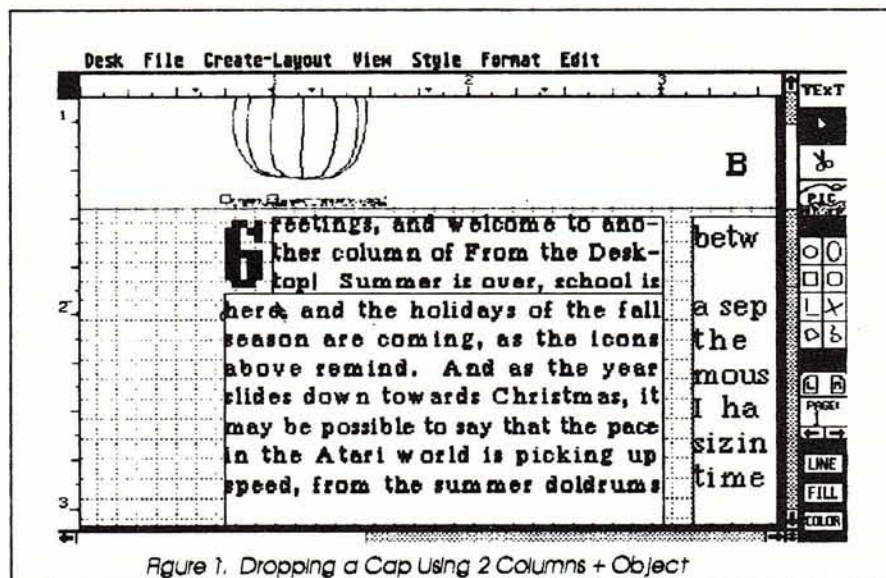


Figure 1. Dropping a Cap Using 2 Columns + Object

November Demo

Any day now, I should have - finally - the printer-based image scanner I mentioned in my first column. Because watching a slow scan of a piece of paper would not make much of a demo, I don't plan to try and show it during the main meeting. Instead, I plan to bring the setup and show the scanner before the November meeting, from 9:00 to 9:30. So if you want to see the scanner in operation, mark your calendar for November 14, and get to the meeting early!

Also in November ...

The November column will talk about the image scanner. Also in November - if I get the article to Dave Noyes on time - will be a story on the AtariFest in Washington DC, October 24 and 25. Which I will be attending. I'll try and note the 8-bit stuff as well as the ST, but don't be surprised if MEGA, DTP and MIDI top the list. Until then ...!

John D. Sullivan

917A Preakness Avenue, Wayne, NJ 07470.
(201) 790-3061

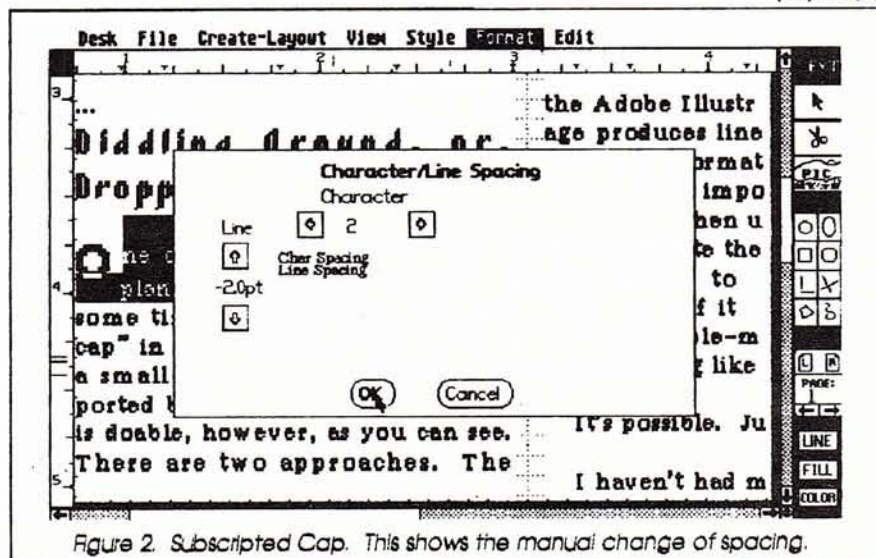


Figure 2. Subscripted Cap. This shows the manual change of spacing.

Now back to the computer. I've read many reviews of Atari's "Donkey Kong" cartridge for the 8-bit Ataris, and I keep reading the same statement in one form or another: "Atari didn't put in the introduction where Donkey Kong climbs the building and jumps all over it." Untrue! Sure, Atari didn't place it at the beginning of the game, but it's still in the cartridge. Just plug it in and sit back for a few minutes (don't touch the keyboard). Surprise! Our second favorite monkey (King Kong, of course, is first) climbs up the ladder and jumps all over the place.

Another little goodie comes from the AtariArtist software packaged with the Atari Touch Tablet. I think I might have been one of the first people to find out about this. Believe it or not, AtariArtist makes music! Go to the menu and click the cursor on the center bar of the Atari logo in the top-left corner of the screen. You'll hear Atari's old theme song ("Have you played Atari today?") come out of the monitor speaker! That was a nice little touch.

Although I don't consider it to be an Easter Egg, it is an interesting fact. Have you ever played with an Atari 1200XL and any other XL or XE? If you have, check out the "Keyboard Test" part of the self-test menu. (NOTE: This will only work if you activate the "All Tests" function where the keyboard types on itself.) On the 1200XL, the keyboard types out the name of the programmer or the self-tests. On all other XL/XE models, Atari changed that to "Copyright 1983 Atari"! It sure took the guys at Atari long enough to find this, eh?

This next one really is more like a game tip than an Easter Egg. Have you ever played "Defender" on your 8-bit? If so, you may have been a little more than annoyed at the saucer that materialized on the screen (and sometimes on you) when you took too long to finish the round. If this has happened to you, rejoice - there is a way to get through that. As soon as you hear the saucer start to materialize, simply thrust forward (the direction you were facing when the saucer started to make its appearance) and move about 2/3 the way up the screen. After the saucer is material, simply reverse direction (DO NOT THRUST) and blast it. Sometimes he gets sneaky and zips around the entire planet to get to you, so keep an eye on the scanner. You can also use this tactic to gain extra men (although it takes awhile). Just blast all the enemies on the screen except one (choose one that can't fire at you and/or moves relatively slow; bombers, swarms, and pods are good for this) and pick off the saucers one by one.

Well, I've babbled enough for this month. Next month, I'll probably go back to reviews or maybe write an editorial (?) or something. Whatever the case, enjoy your Atari and always remember that Atari isn't just a game machine (even though it plays the best 8-bit games around). See ya!



STYLEWRITER
Carolina Engineering Laboratories
818 Tyvola Road
Charlotte, NC 28210
(704) 525-4423
List Price: \$199 (with 128K buffer)

Dan Shanefield - JACG

Stylewriter is a (literally) black box which attaches between your computer and the printer, and it enables an ordinary printer to switch fonts at the command of symbols that you embed in your word processor text. For example, it can let you print an Old English title, followed by a very classy looking typewriter font. I find it to be quite useful in making large type for overhead transparencies. Math symbols and greek letters are available, also.

This little black box was reviewed in the July issue of ANTIC, but I would like to add my experiences of about a year to the reviews. I use Stylewriter to make business stationery, slides for talks, and just for fun when writing personal letters. However, it has some annoying quirks that ANTIC didn't warn you about.

Each font is encoded in a ROM chip, inside a DIP that plugs into a socket. Two of these come with the box, and you have to pay extra for others. If you order the box from C.E.L., ask for samples of the print styles first. You have to tell them what printer and computer you will use, and they custom-bur the ROM chips for you. Only five sockets are provided, so you might have to do some unplugging to change fonts once in a while. A very good buffer is included in the box, by the way, so it's more than just a font changer.

I found that, although "Courier 10 Point" is the font that looks most like a typewriter, it's too big, at least with my Epson MX-80 printer. Therefore I use "Sans Serif 12 Point," which for some reason is smaller, and looks very close to what an expensive daisy wheel would print. Their "Symbols" chip has the most common math and Greek fonts, while their "Math" chip has more unusual shapes that I have never used yet. You probably won't need to buy a "Bold" font, because there is a command to make any ordinary one bold. (However, I use the "Quality" command instead, because it looks cleaner, and it's quite dark.)

Generally, the print is accurately described by C.E.L. themselves as "near-letter quality. You'll never fool anyone into thinking you have a daisy wheel, but it looks so nice that nobody will care. Readers will be impressed, anyhow.

The documentation is excellent, and it's easy to remember the symbols.

One thing the instructions don't emphasize, however, is that your word processor should be set with very wide margins. Th let the Stylewriter margins control the printer.



The worst things about Stylewriter are that it's slow, and that it's fairly unpredictable. I almost always have to print anything new at least twice, because the first try has strange spacings, etc., that can be corrected by compensating spacing the text, but which is a pain to take care of. This, combined with slow running for each try, is a double pain. However, I don't know any other way to get such versatility and impressive quality with a relatively inexpensive system.

**A LITTLE
ABOUT THE LIBRARY**

BRETT CALLEGARI - JACG

MANY PEOPLE HAVE EXPRESSED THEIR FRUSTRATION IN NOT HAVING GOOD OR ANY DOCUMENTATION AT THE MEETINGS TO THE LIBRARIANS. HERE IS WHAT WE HAVE BEEN DOING ABOUT THIS SITUATION.

VARIOUS MEMBERS OF THE CLUB HAVE BEEN TAKING DISKS FROM THE LIBRARY AND EITHER REEVALUATING THE PRESENT DOCUMENTATION OR WRITING NEW DOCUMENTATION FOR THESE DISKS AND PROGRAMS.

AS OF THIS DATE VOLUMES 1 THRU 58 ARE IN PRETTY GOOD ORDER. UNFORTUNETLY IT HAS TAKEN US MUCH LONGER TO GET HERE THAN WE EVER IMAGINED, SO AS USUAL WE ARE LOOKING FOR VOLUNTEERS TO TAKE DISKS FROM THE LIBRARY AND WRITE DOCUMENTATION SO THAT EVERYONE IN THE CLUB CAN BE MADE AWARE OF THE REALLY GOOD SOFTWARE THAT IS IN OUR CLUB LIBRARY.

WHAT WE ARE GOING TO DO WITH THIS DOCUMENTATION IS ASSEMBLE IT ON DISK SO THAT USERS CAN TAKE THE DISK LISTING HOME AND DECIDE AT HOME WHAT TO BUY TO MAKE THINGS EASIER (MY WIFE AND I HAVE BEEN TYPING IN DOCUMENTATION FOREVER)

FOR THE PEOPLE WHO DO NOT GO TO MEETINGS DISKS ARE OF COURSE STILL AVAILABLE THRU MAIL ORDER.

HOW TO ORDER

The legendary JACG library contains programs to entertain, confound, amuse, delight, and assist you. These have been selected from member contributions, exchanges and contributions from other Atari clubs throughout the world. No program is warranted or guaranteed in any way by JACG or any other party, and JACG accepts no responsibility other than to replace at no charge any disk found to be physically defective.

The library is public domain material. It is JACG library policy to not knowingly include in the library any commercial or copyrighted software, except by permission of the owner.

The library is organized into volumes for duplication purposes. While the software itself is considered free to users, and members are free to exchange or duplicate the software, we do charge for disks. These charges cover costs of media, wear and tear on the library disk drives, and postage.

OBTAINING VOLUMES

The disk library is available at all JACG monthly meetings. Disks may be obtained in the lobby before each meeting. There is a charge of \$5.00 per volume (one disk of programs). We provide the disks.

Some but not all of the library programs can be transferred to and will work on cassette based Atari systems.

BUT I LIVE in ALASKA! Yes, we know. You can order disk volumes by mail. These are \$6.00 per volume. Send a check for the proper amount (not cash) made out to JERSEY ATARI COMPUTER GROUP and specify the volumes desired. Send to:

J.A.C.G.
ATTN. BRETT CALLEGARI
306 DIVISION STREET FLOOR 2
BOONTON, N.J. 07005
(MAKE CHECKS PAYABLE TO J.A.C.G.)
(201)334-0285)

Do NOT SEND a self addressed stamped envelope or blank disks when with mail orders. The \$6.00 fee takes care of all that.

CONTRIBUTIONS

Contributions to the library are very welcome. Don't be shy. If YOU think what you invented is neat other members probably will too! Send in your creation on a disk. We'll return the disk with a couple of free programs and maybe some helpful advice on how to make it even more fantastic.

AGAIN IF YOU WOULD LIKE TO HELP OR HAVE ANY IDEAS SEE ME (BRETT) AT THE TABLE IN THE LOBBY SELLING DISKS BEFORE AND AFTER THE MEETINGS.

IF ANYBODY HAS A PROBLEM WITH A DISK THAT WAS BOUGHT FROM THE LIBRARY THEY CAN CALL ME AT HOME (7-9PM PLEASE, 334-0285) OR WRITE TO ME FOR MORE INFORMATION ABOUT OUR DISKS. THANX

FOR SALE

DEC PC350 computer. 512K memory with F11 processor. 10 Meg Winchester drive and two 720K floppy drives. Used for one semester in school where it was under full maintenance. No blemishes on case. Comes with all manuals, shipping cartons, and dust covers. Includes Prose, EDT, and Word 11 text editors. Excellent for word processing, or heavy number crunching. If you or your company are interested in this system, please call Joe Wyks at (201) 265-3762 after 2 pm. I will accept offers around \$1300.00.

SCIENTIFIC NOTATION FORMATTING

David E. Dvorin - JACG

For those people who write programs that display many numbers, I offer you a very short subroutine that formats ANY number. Not only will this subroutine allow for easy output manipulation but will also allow the user to define how much of the number will be displayed. If you are interested, please read on.

Computers present numbers in basically two formats. The first is illustrated by the result of 1 divided by 3 or 0.33333333. This is called a real number. If you know the real numbers you need to display are within a certain range, then formatting those numbers may be easy. For instance, if a program deals with financial decisions, formatting numbers in a dollar notation is not difficult. However, what if the range of real numbers your program can offer is limited only by the range of your computer? An example where this may be the case is in plotting functions. The range of numbers a function can generate is infinite. Letting the function be $y = x^3$ implies the range of y and x be from negative infinity to positive infinity. Dollar notation certainly cannot assist in the displaying of such a wide range of numbers.

When numbers become very large or very small, it is common for many computers to automatically display those numbers in what is known as scientific notation. This kind of format has the following form:

Scientific notation	real number equivalent
12.34E3	12340
-653.9E2	-65390
-39.53398E-8	-.000003953398

The number to the left of the 'E' is called the mantissa. The number to the right of the 'E' is called the exponent. The letter 'E' signifies 10 raised to the power of the exponent. This implies a more common way of writing scientific notation:

$$12.34E3 = 12.34 \times 10^3$$

12.34 is the mantissa and 3 is the exponent. Any real number can be converted to scientific notation. A problem arises because the change of a displayed number to scientific notation is usually automatic, with the length of the mantissa automatically determined by the computer. An unknown length in a number makes space allocation for screen displays and hardcopies difficult.

The solution may be found in the following short subroutine that can be placed in any BASIC program. There are two things to consider when using this subroutine. First, the number that will be converted to scientific notation and second, the number of significant digits after the decimal

point. (I am defining significant digit as a number to the right of the decimal point.) What this subroutine will do to a number can be shown by example. Let the number to be converted equal .123456789. If we want 5 significant digits after the decimal point, the subroutine will change the number to 1.23457E1. Notice the subroutine also rounds off the last significant digit.

Before using the subroutine, certain conditions must be met.

- (1) The number coming in to the subroutine is placed in the variable NUM.
- (2) The number of significant digits coming into the subroutine is place in the variable SIGFIG.
- (3) The number coming out of the subroutine is placed as a string called SCINOT\$.
- (4) The string SCINOT\$ is dimensioned to the number of significant digits plus seven.

The seven takes care of the signs for the mantissa and the exponent, the one digit for the mantissa, the decimal point, the E symbol and the maximum number of digits for the exponent.

Having control, over how many spaces on the screen or printer a resulting number will occupy, makes displaying results much easier to cope with. I hope this handy subroutine finds a place in one of your programs and library.

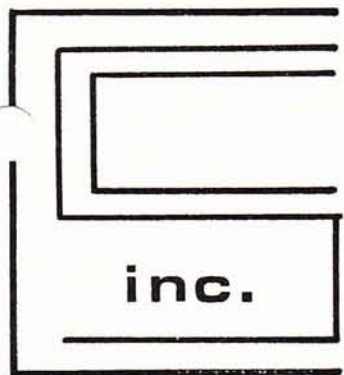
LISTING 1 -- ATARI BASIC

```

5 REM -- REMEMBER: DIMENSION SCINOT$ TO 7+SIGFIG;
6 REM -- NUMBER TO BE CONVERTED IS PLACED IN VARIABLE 'NUM';
7 REM -- NUMBER OF DIGITS BEYOND THE DECIMAL POINT IS PLACED
  IN THE VARIABLE 'SIGFIG';
8 REM -- THE OUTPUT NUMBER IS PLACED IN THE STRING 'SCINOT$'
10 IF NUM=0 THEN SCINOT$="0":RETURN
20 EXPD=INT(CLOG(ABS(NUM)))
30 DENOM=10^EXPD
40 SCINOT$=" "
50 IF SGN(NUM)=-1 THEN SCINOT$="- "
60 SCINOT$(2)=STR$(INT((NUM/DENOM)*SIGFIG+0.5)/SIGFIG)
70 SCINOT$(LEN(SCINOT$)+1)="E"
80 SCINOT$(LEN(SCINOT$)+1)=STR$(EXPD)
90 RETURN

```





**COMPUTER SYSTEMS
CONSULTANTS, INC.**
Box 873, 897 U.S. RT. 130
Hightstown, N.J. 08520
(609) 448-8888/9

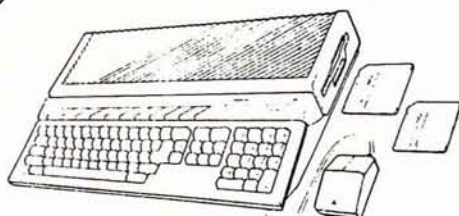
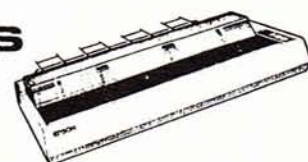
**BEFORE CALLING US, CALL AROUND
THEN CALL US FOR LOWEST PRICE!**

**We Are A Certified Atari/Epson
Service Center/Dealer**

Low Overhead = Low Prices



- 520 ST color or mono
- 1040 ST color or mono
- ALL EPSON Printers
- ST Software
- Peripherals
- Cables, etc.



**visa-m/c
9 am - 5pm
mail orders**

Planetarium Fix

by Dave Jones, GRASP Member

This program fixes the problem in booting Atari Planetarium in 1050 disk drives that have the ICD US Doublers installed. If possible, check for the proper operation of the original disk in a standard 1050 before making modifications.

```
10 REM PLANETARIUM FIX - US DOUBLER
11 REM 4/30/87 GRASP - RICHMOND, VA.
12 PRINT :PRINT "NOTE THAT THIS PROGRAM
WILL MAKE A"
13 PRINT "PERMANENT CHANGE TO YOUR
PLANETARIUM"
14 PRINT "DISK !"
15 PRINT :PRINT "NOTCH SIDE ONE OF THE
PLANETARIUM"
16 PRINT "DISK AND INSERT INTO 1050 DRIVE
1"
17 POKE 769,1:POKE 770,82:POKE 773,6
18 POKE 772,128:POKE 778,7:POKE 779,0
19 POKE 1531,104:POKE 1532,32
```

```
20 POKE 1533,83:POKE 1534,228
21 POKE 1535,96
22 GOSUB 37
23 POKE 770,87
24 A=PEEK(1697):B=PEEK(1702)
25 IF A=32 AND B=96 THEN 29
26 IF B=32 AND A=96 THEN 33
27 PRINT :PRINT "NOT PROPER PLANETARIUM
DISK !"
28 END
29 PRINT :PRINT "CREATING FIX"
30 GOSUB 37
31 PRINT :PRINT "DONE !"
32 END
33 PRINT :PRINT "RESTORING TO ORIGINAL"
34 GOSUB 37
35 PRINT :PRINT "ORIGINAL RESTORED !"
36 END
37 PRINT :PRINT " PUSH START TO CONTINUE"
38 IF PEEK(53279)<>6 THEN 38
39 POKE 1697,B:POKE 1702,A
40 X=USR(1531)
41 IF PEEK(771)=1 THEN RETURN
42 PRINT :PRINT "DISK ERROR ";PEEK(771)
```

enchanting new software to delight your whole family!



for Atari 8-bit and ST computers

*Stop by your favorite retailer's
and ask for our latest volume!*

*call 1-800-345-6467 for more information
(in TX call collect 214-788-4441)*

Remember, receiving the JACG Newsletter
is just one of the many benefits of being a
member of JACG.

MAIL TO:

Robert P. Mulhearn
8 Crescent Road
Pinebrook, NJ 07058

DUES:

US (inc. APO, FPO, etc.), Mexico and Canada - **\$25.00**
First class mailing of newsletter add \$6.00

Foreign memberships - **\$30.00** (U.S. CURRENCY)

JACG

MEMBERSHIP APPLICATION/RENEWAL

RENEWAL _____ NEW MEMBER _____ FORMER MEMBER _____

Name _____ Member # _____

Address _____

City/State/Country _____ ZIP: _____

Home Phone Number _____

Date _____ 1st CLASS MAIL _____ 3rd CLASS MAIL _____

=====
Membership Renewal
=====

Take a moment and look at your mailing label on a recent issue of the JACG newsletter. Check the bottom right hand corner following "Last Issue:". This is the month/year when your membership expires. Try to renew at least one month early. This helps us keep our book keeping in order and avoids your missing any issues of the newsletter.

There are two easy ways to renew:

1. Fill out a membership renewal form in the front lobby before our monthly meeting and present it with \$25 (in cash or check) to the Treasurer. Add \$6 for first class mailing of the newsletter.
2. Copy the information on your mailing label and send, with your remittance, to:

Robert P. Mulhearn
8 Crescent Road
Pinebrook, NJ 07058

>>>CHECK YOUR LABEL<<<
>>>TODAY!<<<

JACG Newsletter Advertisements

RETAILERS - MANUFACTURERS - VENDORS

How would you like to reach a targeted audience of over 700 ATARI computer users? This newsletter has a press run of 800 per month, is read by members and non-members alike, and is sent to over 60 other ATARI User Groups across the U.S. and in several other countries.

Advertising is available on a first-come and space-available basis. Camera ready copy, accompanied by payment, must reach the Editor by the 20th day of the month preceding publication. JACG reserves the right to make decisions concerning the placement of ads within the Newsletter and editing or rejecting advertisements deemed unsuitable.

Advertising Rates

Full page (7-1/2 x 9) ... \$48.00
Half page \$25.00
Quarter page \$18.00

Discount rates available upon request.

NEW TO THE ATARI?

NEED A LITTLE HELP?

PRESS CTRL-CLEAR

SYSTEM RESET TO REBOOT

BOOT ERROR...

SET OPTIONS NOW

**MAYBE A JACG
BIG BROTHER CAN HELP**

GIVE US A CALL
201-469-6190

Contact: Gary Gorski
313 Sheridan Ave.
Roselle, NJ, 07203
(201) 241-4554



 # J A C G #
 # #
 # JERSEY ATARI COMPUTER GROUP #
 # #
 # 8 CRESCENT RD. #
 # #
 # PINE BROOK, NEW JERSEY 07058 #
 # #
 #####

 # BULK RATE #
 # U.S. POSTAGE #
 # PAID #
 # PINE BROOK, NJ #
 # PERMIT #56 #
 #####

SAN LEANDRO COMPUTER CLUB
 c/o SLCC NEWSLETT.EXCHG.
 P.O. BOX 1506
 SAN LEANDRO, CA 94577
 OCT87 Y

JACG NEWSLETTER - VOLUME 7, NUMBER 8

OCTOBER 1987

J A C G EXECUTIVE COMMITTEE

PRESIDENT

Thomas Pazel
 70 Mitchell Rd. T-7
 Hackettstown, NJ 07840
 201-850-9017

TREASURER

Shree Vandenberg
 220 Garfield Ave.
 Plainfield, NJ 07060
 201-753-2416
 201-373-6789 Ext.31

LIBRARIAN

Sam Cory
 P.O. Box 7
 Towaco, NJ 07082
 201-334-4443

DISK LIBRARIANS

Dave Green
 Doug Van Hook
 Charlie Miller (ST)
 Linda Peckham (ST)

VICE PRESIDENT

8-BIT

Doug Van Hook
 40 Meadow Lane
 Clifton, NJ 07012
 201-472-0637

EDITOR

David B. Noyes
 3 Ann Rd.
 Long Valley, NJ 07853
 201-852-3165

INTERNATIONAL CHAIRMAN

Barry Weissman
 125 Runyon Ave.
 Piscataway, NJ 08854
 201-885-5161

PRES. EMERITUS

Joseph S. Kennedy
 126 Jupiter St.
 Clark, NJ 07066
 201-381-5559

BBS CO-SYSOPS

Mark Knutsen
 Gary J. Gorski
 Thomas Shoosmith

VICE PRESIDENT

16-BIT

Thomas Shoosmith
 93 Patricia Ave.
 Colonia, NJ 07067
 201-388-5952

SECRETARY & MEMBERSHIP

Robert P. Mulhearn
 8 Crescent Road
 Pinebrook, NJ 07058
 201-575-0067

MAIL ORDER LIBRARIAN

Brett Callegari
 306 Division St. Floor #2
 Boonton, NJ 07005
 201-334-0285

ADVERTISING & SALES

Gary J. Gorski
 313 Sheridan Ave.
 Roselle, NJ 07203
 201-241-4554

The Jersey Atari Computer Group (JACG) is an independent, informal organization of ATARI computer users. It is not affiliated with Atari or any other commercial enterprise. Opinions expressed in this publication reflect only the views of the individual author, and do not necessarily represent the views of JACG. Material in this Newsletter may be reprinted by other Atari User Groups, provided the author (if applicable) and JACG are given credit. Only original work may be reprinted. Questions concerning reprinting should be addressed to the Editor.